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Particle Measurement Programme (PMP) Light-duty Inter-laboratory Correlation Exercise (ILCE_LD) Final Report

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Abstract

The Light Duty Inter-Laboratory Correlation Exercise has conducted testing at 9 test laboratories in the EU, Korea and Japan in order to demonstrate the practicality, robustness, repeatability and reproducibility of the particle emissions measurement techniques proposed by the Particle Measurement Programme (PMP). The exercise involved testing 16 light duty vehicles including 6 diesels equipped with wall-flow Diesel Particulate Filters (DPFs), 6 conventional diesel vehicles, 3 direct injection petrol engined vehicles and one conventional, multi-point injection petrol-engined vehicle. A DPF equipped Peugeot 407 was tested at all participating laboratories to allow the inter-laboratory reproducibility of measurements to be assessed. The DPF equipped vehicles tested included 2 light goods vehicle derivatives (a Mercedes Vito and a Mazda Bongo). Vehicles were tested over multiple repeats of the EU regulatory Type 1 emissions test. Measurements of solid particle number emissions, particulate mass and regulated gaseous emissions were taken over each test. In addition to particle number measurements made with a Golden System circulated between laboratories, particle number measurements were made with several alternative systems to compare the performance of different measurement systems.

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